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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/739,902	12/20/2000	Valerie A. Simpson	9-13528-137US	4944

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OGILVY RENAULT LLP
1981 MCGILL COLLEGE AVENUE
SUITE 1600
MONTREAL, QC H3A2Y3
CANADA

EXAMINER

COULTER, KENNETH R

ART UNIT PAPER NUMBER

2141

DATE MAILED: 06/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/739,902

Applicant(s)

SIMPSON ET AL.

Examiner

Kenneth R. Coulter

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 March 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-33 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 8-11, 14-17, 20, 21 and 24-33 is/are rejected.
- 7) ☒ Claim(s) 6, 7, 12, 13, 18, 19, 22 and 23 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 December 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 101

1. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 24 - 33 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

The claimed invention is directed to non-statutory subject matter.

Independent claim 24 is directed to software that is not implemented on a computer readable medium.

Data structures not claimed as embodied in computer-readable media are descriptive material *per se* and are not statutory because they are not capable of causing functional change in the computer. See, e.g., *Warmerdam*, 33 F.3d at 1361, 31 USPQ2d at 1760 (claim to a data structure *per se* held nonstatutory). Such claimed data structures do not define any structural and functional interrelationships between the data structure and other claimed aspects of the invention which permit the data structure's functionality to be realized. In contrast, a claimed computer-readable medium encoded with a data structure defines structural and functional interrelationships between the data structure and the computer software and hardware components which permit the data structure's functionality to be realized, and is thus statutory.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1 – 5, 8 - 11, 14 - 17, 20, 21, 24 – 27, 30, and 31 are rejected under 35 U.S.C. 102(e) as being anticipated by Cao et al. (U.S. Pat. No. 6,721,269) (Apparatus and Method for Internet Protocol Flow Ring Protection Switching).

3.1 Regarding claim 1, Cao discloses a method of protecting an Open Shortest Path First (OSPF) network against network failures affecting traffic flow between an interior router (IR) and a predetermined primary area border router (ABR) using a back-up link between the IR and a predetermined alternate ABR, the method comprising steps of:

maintaining the back-up link in a dormant state during normal operations of the network, such that no traffic is forwarded to the back-up link during normal operations of the network (col. 9, lines 6 – 31 “The table of FIG. 2, a product of **OSPF** ...” “The IFINDEX field 310 indicates which egress link from the current router should be employed to reach the next hop router.” “The **status field 316** indicates whether the associated link is up or down, that is, whether the **link is operating or not.**” “The router

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type field 312 indicates whether the router is an **internal router**, an **area border router**, a backbone router, ..."; col. 4, lines 46 – 51 "upon a **failure in a path** selected as a primary path, a **secondary path is instantaneously selected as the new primary path**. Since the new route is already established, and data is already flowing to the sink router along the secondary path, a path need not be computed, ...") and activating the back-up link in response to a network failure affecting communications between the IR and the primary ABR, such that traffic can be routed between the IR and the alternate ABR through the back-up link (col. 9, lines 6 – 31; col. 4, lines 46 - 51).

3.2 Per claim 2, Cao teaches a method as claimed in claim 1, wherein the step of maintaining the back-up link in a dormant state comprises steps of:

assigning a backup interface type attribute to the back-up link (Fig. 2, item 310; "col. 9, lines 21 – 22 "IFINDEX field 310"); and

controlling each of the IR and the alternate ABR such that:

information respecting the back-up link is not advertised to adjacent routers (col. 9, lines 6 - 31); and

the back-up link is not identified as a valid route in respective forwarding tables of each of the IR and the alternate ABR (col. 9, lines 29 – 31 "status field 316 indicates whether the associated link is up or down.").

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3.3 Regarding claim 3, Cao discloses a method as claimed in claim 1, wherein the step of activating the back-up link comprises steps of:

detecting the network failure affecting communications between the IR and the primary ABR (col. 2, lines 19 – 24 “new routers may employ ... maintenance information ... to detect such path failures.”; col. 4, lines 46 - 51);

promoting the back-up link to an active status (col. 2, lines 19 – 24; col. 4, lines 26 - 35); and

advertising the back-up link as a valid route (Fig. 2, item 316; col. 9, lines 29 - 31).

3.4 Per claims 4 – 5 and 8 - 11, the rejection of claims 1 – 3 under 35 USC 102(e) (paragraphs 3.1 – 3.3 above) applies fully.

3.5 Regarding claims 14 - 17, 20, 21, 24 – 27, 30, and 31, the rejection of claims 1 – 5 and 8 – 11 under 35 USC 102(e) (paragraphs 3.1 – 3.4 above) applies fully.

Response to Arguments

4. Applicant's arguments filed 3/17/2005 have been fully considered but they are not persuasive.

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Applicant argues that Cao does not teach the maintenance of a back-up link in a dormant state; and that Cao teaches that the back-up link is not dormant but carrying data.

Examiner disagrees.

Cao discloses that “upon a failure in a path selected as a primary path, a secondary path is instantaneously selected as the new primary path. Since the new route is already established, and data is already flowing to the sink router along the secondary path, a path need not be computed, and, consequently the time that conventional TCP/IP networks devote to computing a **recovery route** and establishing a new connection is substantially eliminated.” (col. 4, lines 46 – 54).

Examiner interprets this passage as indicating that the data is flowing along the secondary path *after* the secondary path is selected as the new primary path. There is no explicit teaching that data was flowing over the secondary path *before* the secondary path is selected as the new primary path.

Allowable Subject Matter

5. Claims 6, 7, 12, 13, 18, 19, 22, and 23 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kenneth R. Coulter whose telephone number is 571 272-3879. The examiner can normally be reached on 5 4 9.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rupal Dharia can be reached on 571 272-3880. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

KENNETH R. COULTER
PRIMARY EXAMINER



krc